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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,126	02/15/2001	Jeong-Hoon Park	Q62554	1502

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EXAMINER

ABRAHAM, ESAW T

ART UNIT PAPER NUMBER

2133

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

7

Office Action Summary

Application No.

09/783,126

Applicant(s)

PARK ET AL.

Examiner

Esaw T Abraham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date # 5, 01/29/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims **1 to 39** are presented for examination.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

3. The examiner has been considered the references listed in the information disclosure statement submitted on 01/29/2003 (see attached PTO-1449).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims **36-38** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included and excluded by the claim language with the use of the phrase: "possibility of an error correction". This claim is an omnibus type claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims **1-39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (U.S. PN: 6,665,313).

As per claims **1, 4, 5, and 39**, Chang et al. teach or disclose a frame transmitted according to a radio link protocol (RLP), and a device and method for transmitting and receiving a frame in a mobile communication system whereby the frame is comprised of a plurality of multiplex frames each having a given length and further each are comprised of a header and a succeeding RLP frame and further the RLP frame includes at least one of the multiplex frames is comprised of a plurality of sub-multiplex frames whereby each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of a transmission data, and a data block associated to the succeeding RLP frame (see col. 2, lines 40-54). Chang et al. teach a controller (see figure 2 element 140) makes a multiplex frame include a data block adding a service identifier and a length indication field to know a service for transmitting the data block received from the controller of the receiving side when receiving the data block from the service and further the multiplex frame include several data

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blocks and signaling messages provided from several services wherein an information bits include one or several multiplex frames and can further include a CRC (Cyclic Redundancy Code) for checking errors (see col. 6, lines 6-40 and col. 7, lines 26-65). **However**, Chang et al. **do not explicitly teach** the term or phrase ‘catalog of information related to application data service’, Chang et al. teach a controller (see figure 2 element 140) makes a multiplex frame include a data block adding a service identifier and a length indication field to know a service for transmitting the data block received from the controller of the receiving side when receiving the data block from the service (see col. 6, lines 6-40) and further Chang et al. teach six services using the RLP are connected, the controller (140) of the transmission side operates according to the procedure shown in figure 9, the controller (140) of figure 3 determines the transmitting order of the services and the size of the data blocks according to QoS (Quality of Service) guarantee rule whereby controller (140) determines the order of transmitting the services (Step S11a – S17) (see the tables in columns 9-13 and col. 13, lines 41-61) which the system of Chang et al. is dealing with plurality of cataloged or listed services selected according to the QoS rule. **Therefore**, it would have been obvious to a person having an ordinary skill in the art at the time the invention was made to implement a data catalog or list or dictionary relating to application data service. **This modification** would have been obvious because a person having ordinary skill in the art would have been motivated in order to permit flexibility in selection of application data service that result in enhancing link or channel performance and ensure greater data accuracy.

As per claim 2, Chang et al. teach all the subject matter claimed in claim 1 including a

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frame is comprised of a plurality of consecutive multiplex frames each having a given length.

The multiplex frames each are comprised of a header and a succeeding RLP frame, and the RLP frame includes transmission data (see col. 2, lines 40-53).

As per claim **3**, Chang et al. teach all the subject matter claimed in claim 1 including Chang et al. teach the physical layer processor (150) of the receiving side, shown in FIG. 2, analyzes a received signal using a designated decoding and demodulation method, and transmits the information bits filled in the received physical frame to the received physical frame to the controller (140) of the receiving side (see col. 7, lines 26-57).

As per claims **6 and 9**, Chang et al. teach all the subject matter claimed in claims 1 and 4 including Chang et al. teach the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claim **7**, Chang et al. teach all the subject matter claimed in claims 1 and 2 including Chang et al. teach the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claim **8**, Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several

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MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claims **10, 13, and 14**, Chang et al. teach all the subject matter claimed in claims 1, 4 and 5 including Chang et al. teach a frame comprised of a plurality of consecutive multiplex frames each having a given length and further the multiplex frames each are comprised of a header and a succeeding RLP frame, and the RLP frame includes transmission data and furthermore at least one of the multiplex frames is comprised of a plurality of sub-multiplex frames, and each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of the transmission data, and a data block associated to the succeeding RLP frame (see abstract).

As per claim **11**, Chang et al. teach all the subject matter claimed in claims 1 and 2 including Chang et al. teach a frame comprised of a plurality of consecutive multiplex frames each having a given length and further the multiplex frames each are comprised of a header and a succeeding RLP frame, and the RLP frame includes transmission data and furthermore at least one of the multiplex frames is comprised of a plurality of sub-multiplex frames, and each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of the transmission data, and a data block associated to the succeeding RLP frame (see abstract).

As per claim **12**, Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach a frame comprised of a plurality of consecutive multiplex frames each having a given length and further the multiplex frames each are comprised of a header and

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a succeeding RLP frame, and the RLP frame includes transmission data and furthermore at least one of the multiplex frames is comprised of a plurality of sub-multiplex frames, and each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of the transmission data, and a data block associated to the succeeding RLP frame (see abstract).

As per claims **15, 18-20, 23, 24, 29 and 32**, Chang et al. teach all the subject matter claimed in claims 1, 4 and 5 including Chang et al. teach six services using the RLP are connected, the controller of the transmission side operates according to the procedure shown in figure 9, the controller 140 of figure 3 determines the transmitting order of the services and the size of the data blocks according to QoS (Quality of Service) guarantee rule and further the controller determines the order of transmitting the services (Step S11a – S17) (see col. 13, lines 41-61).

As per claims **16, 21 and 30**, Chang et al. teach all the subject matter claimed in claims 1 and 2 including Chang et al. teach six services using the RLP are connected, the controller of the transmission side operates according to the procedure shown in figure 9, the controller 140 of figure 3 determines the transmitting order of the services and the size of the data blocks according to QoS (Quality of Service) guarantee rule and further the controller determines the order of transmitting the services (Step S11a – S17) (see col. 13, lines 41-61).

As per claims **17, 22 and 31**, Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach six services using the RLP are connected, the controller of the transmission side operates according to the procedure shown in figure 9, the controller 140 of figure 3 determines the transmitting order of the services and the size of the data blocks

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according to QoS (Quality of Service) guarantee rule and further the controller determines the order of transmitting the services (Step S11a – S17) (see col. 13, lines 41-61).

As per claims **25 and 28**, Chang et al. teach all the subject matter claimed in claims 1 and 5 including Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach that when there is no signaling message or data block to be transmitted, the controller (140) can transmit the null value to the physical channel with SDU or transmit a regular bit pattern previously appointed with the controller of the receiving side of the physical channel as the information bits (see col. 6 last paragraph) and further if the controller 150 of the receiving side fills the SDU with the null value, judging that no physical channel frame is received, and informs the FRAME_QUALITY that a valid frame is received, then the controller 140 of the receiving side informs all the services corresponding to the physical channel to which the logical channel is connected that no frame is received (see col. 7, lines 58-65).

As per claim **26**, Chang et al. teach all the subject matter claimed in claims 1 and 2 including Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach that when there is no signaling message or data block to be transmitted, the controller (140) can transmit the null value to the physical channel with SDU or transmit a regular bit pattern previously appointed with the controller of the receiving side of the physical channel as the information bits (see col. 6 last paragraph) and further if the controller 150 of the receiving side fills the SDU with the null value, judging that no physical channel frame is received, and informs the FRAME_QUALITY that a valid frame is received, then the controller 140 of the receiving side informs all the services corresponding to the physical channel to which the logical channel is connected that no frame is received (see col. 7, lines 58-65 and).

As per claim **27**, Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach that when there is no signaling message or data block to be transmitted, the controller (140) can transmit the null value to the physical channel with SDU or transmit a regular bit pattern previously appointed with the controller of the receiving side of the physical channel as the information bits (see col. 6 last paragraph) and further if the controller (150) of the receiving side fills the SDU with the null value, judging that no physical channel frame is received, and informs the FRAME_QUALITY that a valid frame is received, then the controller 140 of the receiving side informs all the services corresponding to the physical channel to which the logical channel is connected that no frame is received (see col. 7, lines 58-65).

As per claims **33 and 36**, Chang et al. teach all the subject matter claimed in claims 1 and 29 including Chang et al. teach that the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claims **34 and 37**, Chang et al. teach all the subject matter claimed in claims 1, 2 and 30 including Chang et al. teach that the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claims **35 and 38**, Chang et al. teach all the subject matter claimed in claims 1, 3 and 31 including Chang et al. teach that the multiplex frame MuxPDU can include several data

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blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US PN: 6,590,882 Fong et al.

US PN: 6,542,490 Ahmadvand et al.

US PN: 6,313,768 Allen

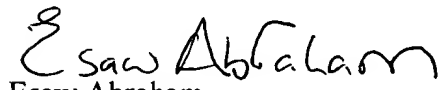
US PN: 6,553,038 Fukuda

US PN: 6,519,223 Wagner et al.

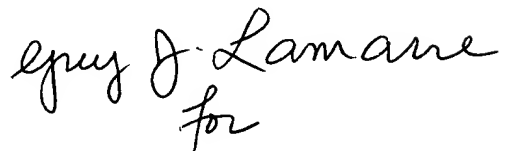
7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (703) 305-7743. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (703) 305-9595. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


Esaw Abraham

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for

Albert DeCady
Primary Examiner